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Effect of Ph on the Growth and Survival of Juvenile Common Carp (*Cyprinus Carpio* L.)

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Abstract

Common carp (*Cyprinus carpio* L.) juveniles averaging 7.68± 0.25 - 8.12± 1.14 g in weight were used for 6 weeks to investigate their survival and growth preferences. The experimented carp were stocked at 12 tanks formerly adjusted with different pH levels values as: 6.0, 7.0, 8.0 and 9.0. Growth and survival of common carp was assessed every Sunday of each week. Growth rates significantly ($P < 0.05$) increased at pH 7 and pH8 respectively. Therefore, the results suggest that the water with pH ranged from 7 to 8 was the best range for growth performance and survival rate of carp. Feed conversion ratio (FCR) improved at pH 6 and 9 respectively. In general, the results indicated that water pH 7- 8 could be more appropriate to juvenile carp culture for best growth performance and survival rate.

Keywords: Juvenile Common Carp , pH, Growth , Survival rate.

تأثيرالأس الهيدروجيني على نمو وبقاء يافعات الكارب الشائع (*Cyprinus carpio* L.).

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الخلاصة

أستخدمت يافعات الكارب الشائع *Cyprinus carpio* L. وبمعدل وزن تراوح من 7.68 ±0.25 – 8.12 ± 1.14 ولمدة 6 أسابيع لغرض معرفة عمر بقاءها وأفضلية نموها. وزعت يافعات الكارب في 12 حوض خلال فترة التجربة وبمستويات مختلفة من الأس الهيدروجيني (6.0 ، 7.0 ، 8.0 ، و9.0). سجل معدل النمو ونسبة البقاء كل يوم أحد من كل أسبوع. أشارت نتائج التحليل الاحصائي وجود أختلافات معنوية ($p< 0.05$) تزداد عند الأس الهيدروجيني 7.0 و8.0 على التوالي. توضح النتائج بان الماء عند الأس الهيدروجيني من 7.0 الى 8.0 يحقق أفضل معدل نمو ونسبة بقاء للكارب. يتحسن معدل التحويل الغذائي FCR عند الأس الهيدروجيني 6.0 و9.0 على التوالي . وبشكل عام تشير النتائج الى ان الماء نو الأس الهيدروجيني الأس الهيدروجيني الذي يتراوح بين 7.0 الى 8.0 يكون اكثر مفضلا في تربية الكارب الشائع للحصول على أفضل نمو ونسبة بقاء.

Introduction

The carp *Cyprinus carpio* (L.) is very demanded fish for human consumption [1- 3] and considered as one of the best suitable freshwater for culture due to its good growth and excellent consumption for the artificial food [2, 4, 5]. Water is very essential for the fish to carry out all their physical roles in water. Water pH is essential for fish production due to pH of water influence on the ordinary physiological functions of the fishes [6]. Juvenile fish are very sensitive to pH levels. It is very critical